

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- ☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE August 12, 1998	APPLICATION NUMBER S2-29790	PERMIT NUMBER	CERTIFICATE NUMBER
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NAME George Yantis			
ADDRESS (STREET) 1855 Yantis Street NW	(CITY) Olympia	(STATE) Washington	(ZIP CODE) 98502

PUBLIC WATERS TO BE APPROPRIATED

SOURCE Unnamed Spring		
TRIBUTARY OF (IF SURFACE WATERS) Schneider Creek		
MAXIMUM CUBIC FEET PER SECOND 0.22	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR 2.5
QUANTITY, TYPE OF USE, PERIOD OF USE 2.5 Acre-feet per year	Irrigation	May 1 thru October 1

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL 150 feet South and 1200 feet West of the center of Section 10.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) NE¼ SW¼	SECTION 10	TOWNSHIP N. 18	RANGE, (E. OR W.) W.M. 2W	W.R.I.A. 13	COUNTY Thurston
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RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Yantis Lots 6 and 7 known as Lots B and C, short subdivision 5499 Vol. 6 Page 129 as recorded in Thurston County Auditor's Office.
Hurd Donation Land Claim Tract C Boundary line adjustment 992903 as recorded in Auditor's File 3272925.

DESCRIPTION OF PROPOSED WORKS

The spring discharge site is completely enclosed by a pumphouse that has been built directly over the spring. The spring discharges to a cistern; overflow from the spring is channeled to the creek. A 3 hp pump sits directly in the cistern. Water is pumped via a 1½ inch line to a pressure tank. An underground sprinkler system and outdoor faucets using hoses and sprinklers are used to irrigate the Paulsruide property. Mr. Yantis will install a separate conveyance system.

DEVELOPMENT SCHEDULE		
BEGIN PROJECT BY THIS DATE: Started	COMPLETE PROJECT BY THIS DATE: June 1, 2006	WATER PUT TO FULL USE BY THIS DATE: June 1, 2008

REPORT

BACKGROUND:

On August 13, 1998, George Yantis, Jr., applied for a permit to appropriate public water from an unnamed spring at withdrawal rate of 0.22 cubic feet per second (cfs) for multiple domestic use and lawn and garden irrigation. The project site is within the Deschutes River watershed in Water Resources Inventory Area (WRIA) 13.

A legal notice of the proposed appropriation was published September 30 and October 7, 1998. There were no protests to the application.

Based on the provisions of 90.03 Revised Code of Washington (RCW), I recommend approval of this application.

INVESTIGATION:

In response to this request, I reviewed the information submitted with the application, relevant reports, and Department of Ecology records. A project site visit was conducted on February 6, 2003 and again on July 29, 2003, with Steve Boessow, biologist with Washington Department of Fish and Wildlife (WDFW). Other investigations included a review of recorded water rights, registered claims, water well reports, and information submitted with the application. Additional evaluation of the application was conducted by Steve Boessow, who also visited Schneider Creek on May 15, 2003 and on July 28, 2003. An interview was conducted with the applicant, George Yantis, Jr. and prospective water user Phillip Paulsruide.

The Yantis property is located on the southern portion of the Cooper Point Peninsula at an approximate elevation of 120 feet above mean sea level (msl) on property that looks eastward towards Budd Inlet. The Yantis property lies within Olympia city limits, in a residential area served water by the City of Olympia. Mr. Yantis owns three parcels of property. The residence and yard area occupy two nearly-level parcels that total 2 acres. The third parcel is an adjacent undeveloped parcel that consists of a steep-sided ravine that is forested. An unnamed stream, referred to as Schneider Creek, occupies the bottom of the ravine and discharges to Budd Inlet.

The spring discharges above the level of Schneider Creek, at an elevation of approximately 50 feet below the top of the slope. The spring discharge site is completely enclosed by a pumphouse that has been built directly over the spring. The spring discharges to a cistern. Overflow from the spring is allowed to flow directly into the creek. At the time of the site visit on February 6, 2003, the creek was approximately 5 feet wide with an average depth of 6 to 10 inches. Minimal change in the width and discharge of the creek was noted on the July 28, 2003 site visit.

Mr. Yantis owns the pumphouse. The spring was previously used by Mr. Yantis to provide community domestic supply to 40 homes between 1951 and 1960. The system operated as Belvidere Water Company under Water Permit No. 14495 (issued December 9, 1957) which authorized the use of 0.5 cfs for continuous year-round use. When the City of Olympia extended a high pressure main water line to the area, use from the spring discontinued.

The Paulsruide property is located on the hillside directly above the spring. It consists of approximately ½ acre of ornamental and native plants and a vegetable garden. The spring discharges on property owned by Mr. Paulsruide.

General Area Hydrogeology

The presented geologic/ hydrogeologic information was extracted from a Department of Ecology Memorandum dated April 22, 2003 prepared by Tammy Hall, hydrogeologist at Department of Ecology’s Southwest Regional Office.

The presented geologic/ hydrogeologic information was compiled from the following references:

- Drost, B.W., Turney, G.L., Dion, N.P., and Jones, M.A., 1999, *Conceptual Model and Numerical Simulation of the Ground-Water-Flow System in the Unconsolidated Sediments of Thurston County, Washington*: US Geological Survey Water Resources Investigations Report 99-4165.
- Drost, B.W., Turney, G.L., Dion, N.P., and Jones, M.A., 1998, *Hydrology and Quality of Ground Water in Northern Thurston County, Washington*: US Geological Survey Water-Resources Investigations Report 92-4109 (revised).

A series of glacial advances and retreats is largely responsible for the resulting landscape in the Puget Sound area. These episodes of glaciation have been marked by layers of unconsolidated deposits more than 2,000 feet deep in some areas of Thurston County. Unconsolidated deposits found on the Cooper Point Peninsula may be greater than 500 feet deep and generally become thicker northward towards Cooper Point.

The deposits are referred to as “geohydrologic” units because they were identified using a combination of geologic (primarily grain size and sorting) and hydrologic (hydraulic conductivity and hydraulic continuity) properties. These unconsolidated deposits may be glacial or non-glacial in origin. Glacial aquifers may be composed predominately of sand and (or) gravel, but may also contain relatively thin and discontinuous lenses of clay and (or) silt. In addition, confining layers composed predominately of silt and (or) clay, may also contain local lenses of coarse sand or gravel. Glacial deposits described as tills or hardpan was deposited directly by the glacier. The non-glacial deposits were left by streams carrying meltwater or by water that was impounded behind masses of ice. Recessional outwash, deposited by streams emanating from the melting and retreating glacier, consists of poorly to moderately sorted sand and gravel.

Report Continued

The geohydrologic unit exposed at the surface in the project area has been designated as the Qvr. This unit is composed of primarily of Vashon-age recessional outwash but also contains Holocene alluvium and deltaic sand and gravel. These deposits are the youngest and most widely exposed at the surface found in Thurston County. Locally, perched groundwater may exist in this unit because of the low vertical permeability of the underlying glacial till. This unit is generally between 10 and 50 feet in thickness, but locally may be as thick as 150 feet.

Underlying the Qvr, is the Qvt geohydrologic unit. This unit is composed of Vashon-age till, and possibly some older tills. The Qvt is generally between 25 and 50 feet in thickness and considered a confining bed. The unit Qvt is generally considered a poor source of water.

The Vashon advance outwash, represented as geohydrologic unit Qva, is an important aquifer in northern Thurston County. In the Cooper Point Peninsula area, the unit is relatively thin or absent, and therefore has not been developed extensively. Where it is present, Qva is generally between 15 and 35 feet thick, but locally may exceed 150 feet in thickness.

Underlying the Qvt, is the Kitsap Formation (Qf). The Qf is composed of predominately poorly permeable materials, but thin lenses of sand and gravel can yield relatively small quantities of water suitable for domestic use. It is also effective in retarding the downward percolation of groundwater into the underlying units and has the ability to act as a confining layer to those materials lying below it. Qf is generally between 15 and 75 feet thick.

Groundwater generally moves toward marine water bodies and to surface drainage channels. Water levels in upper aquifers are generally higher than in lower aquifers, indicating that water flows vertically downward, passing through units of lower permeability before discharging to either salt water or to surface water drainages.

Hydrologic Conditions and System Description

During both site visits, several springs were observed to be discharging along the ravine at a distance of approximately 50 feet below the top of the slope. The springs appeared to be discharging above a finely layered sequence of clays above the base of the creek and water discharging from the springs is allowed to flow into the creek. Vegetation along the hillside above the discharging springs indicated moist soil conditions. Based on information in Drost (1998), it is likely that the springs are discharging at the base of the Qvr geohydrologic unit. Drost (1998) also indicates the presence of the Qva geohydrologic unit within the ravine for the unnamed creek.

Mr. Paulsruide indicates that he utilizes a 3 horse power (h.p.) pump that sits directly within the cistern. Water is pumped uphill via a 1½ inch line to a pressure tank which serves to pressurize the system. An underground sprinkler system and outdoor faucets using hoses and sprinklers are used to maintain approximately ½ acre of ornamental and native plants and vegetable garden.

A separate conveyance system would be installed by Mr. Yantis.

Affects to Surface Water

Use from this spring is not expected affect regulated surface waters within the Deschutes watershed. The spring discharges to Schneider Creek which empties directly to Budd Inlet. There do not appear to be any other water uses from this creek. Schneider creek is approximately 1 mile long and appears to originate in Olympia's Westside community.

Although springs provide some flow to the creek, baseflow is supported primarily by groundwater discharge from the Qvr and Qva geohydrologic units. Both Qvr and Qva geohydrologic units serve as aquifers within the WRIA. During the site visit on July 28, 2003, the pump was operating within the pumphouse and overflow was being diverted to Schneider Creek.

An evaluation regarding fish habitat conditions and the effects of potential withdrawals on flows in Schneider Creek was conducted by Steve Boessow, biologist, with Washington Department of Fish and Wildlife (WDFW) and summarized in a memo dated May 15, 2003. Coho are known to spawn in Schneider Creek and reduction of flows during the fall could limit access of adults while low summer flow would limit rearing habitat for juveniles. The creek is also supports cutthroat trout.

WDFW Policy 5204 allows diversion of water in streams with a toe width of more than 5 feet. In the lower reaches of Schneider Creek, the toe width ranges from 6 to 12 feet, which will allows diversion in accordance with this policy. The final recommendation from WDFW is that so long as there is overflow from spring to the creek at all times, water use from the spring is permissible. The spring being utilized is one of many springs in the drainage and the spring is not contributing significant flow to the creek.

Neighboring Water Rights

Because the project site is located within the service area for the City of Olympia, use of water from individual water wells is sparse. The following water right certificates, claims, and well reports located within a one mile radius of the Yantis property are on file at Ecology:

- One ground water certificate authorizing the use of 100 gpm and 160 ac-ft per year. The water is being used for heat exchange.
- Seven surface water certificates have been issued authorizing the withdrawal of rate 0.085 cfs for single domestic and multiple domestic supply, frost protection, and commercial irrigation from creeks and springs. One certificate, issued to Buchanan Lumber Company in 1923, identifies the source of water as Schneider Creek, although USGS quadrangle maps do not list a name for the creek. Buchanan Lumber Company is no longer in business.
- Thirty nine groundwater and surface water claims are registered.
- The Department of Ecology's well log data base listed three water wells.

WATER DEMAND:

Mr. Paulsruide irrigates approximately ½ acre of ornamental and native plants and a vegetable garden. Water use should not exceed 0.5 ac-ft of water for seasonal irrigation.

Mr. Yantis would likely irrigate approximately 2 acres of lawn and gardens. Water duty for 2 acres of irrigation is approximately 2 ac-ft per year for seasonal use.

FINDINGS AND CONCLUSIONS:

- The proposed diversion is from a spring. This spring discharges to a ravine adjacent to an unnamed stream, which discharges directly to Budd Inlet. As such, use from this spring will not impair regulated surface water flows in the Deschutes River Watershed.
- WDFW Policy 5204 allows diversion of water in streams with a toe width of more than 5 feet. In the lower reaches of Schneider Creek, the toe width ranges from 6 to 12 feet, which will allow diversion in accordance with this policy.
- The spring being utilized is one of many springs in the drainage and the spring is not contributing significant flow to the creek.
- Water is available for appropriation from this source, and the proposed use is for a beneficial purpose.
- The issuance of this water right is not expected to be detrimental or impair any senior water right holders. I do not anticipate any adverse effects to result from this diversion.

RECOMMENDATIONS:

Based on the provisions of 90.03 and 90.44, I find that water available for appropriation from the source in question and that the appropriation would not impair existing rights. I recommend the issuance of a water right permit in the amount of 0.22 cfs and 2.5 ac-ft per year for seasonal irrigation of 2½ acres.

PROVISIONS:

"In accordance with recommendations from WDFW, overflow from spring to the creek must occur at all times."

A certificate of water right will not be issued until a final investigation is made.

The applicant is advised that notice of Proof of Appropriation of water (under which the final certificate of water right is issued) should not be filed until the permanent distribution system has been constructed and that quantity of water allocated by the permit to the extent water is required, has been put to full beneficial use.

The water user is advised that quantities recommended, and the number of acres to be irrigated, may be reduced at the time of issuance of a final water right commensurate with the capacity of the installed system, and the number of acres actually irrigated.

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded annually and maintained by the property owner for a minimum of five years, and shall be promptly submitted to Ecology upon request.

At such time as flows are established on this stream, in accordance with Chapter 90.22 RCW or Chapter 90.54 RCW, this permit shall be conditioned to the extent of the new setting, provided that, under no conditions shall the permittee be subjected to a more restrictive low flow requirement.

The Water Resources Act of 1971, Chapter 90.54 RCW specifies certain criteria regarding utilization and management of the waters of the State in the best public interest. Favorable consideration of this application has been based on sufficient waters available, at least during portions of the year. However, it is pointed out to the applicant that this use of water may be subject to regulation at certain times, based on the necessity to maintain water quantities sufficient for preservation of the natural environment.

In accordance with Chapters 90.03 and 90.44 RCW, I find there is water available for appropriation from the source in question, that the appropriation as recommended is a beneficial use, and should not impair existing rights or be detrimental to public welfare.

REPORTED BY:  Date: October 21, 2003

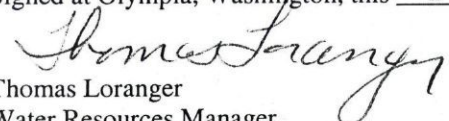
The statutory permit fee for this application is \$5.00.

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find water is available for appropriation and the appropriation as recommended is a beneficial use and will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER a permit be issued under Surface Water Application Number S2-29790, subject to existing rights and indicated provisions, to allow appropriation of public surface water for the amount and uses specified in the foregoing report.

Signed at Olympia, Washington, this 21st day of October, 2003.


Thomas Loranger
Water Resources Manager
Southwest Regional Office